



SWARC NEWS

Notes from K7RLH

Look for more about the April meeting program further down in this newsletter. Raffle tickets for two \$250.00 gift cards are available and I will continue to hand them out. If you reach out to me, I will meet you somewhere for the handoff. The raffle will be drawn at 6:00 pm on June 24th, the Saturday of the Field Day weekend.

Thank you very much for club member support at RARSfest. Club members attending and assisting were: Steve, KA0GMY, Steve, WB4SMS, Brian, KK4BK, Charley, KE4QBW, Dave, NW3U, Dave, K4MSE, and Rodney, KO4ZFO. We sold raffle tickets, obtained some new members and made about \$70 for the club treasury selling the donated equipment.

We ask you to keep the following in your thoughts and prayers:

Gary, KO4LQX, Kenny, KJ4CVK, Velda, K4VJC, Mike, KD4MC, and Steve, KA0GMY.

Steve, KA0GMY, is going next Tuesday to schedule a heart procedure, which he says proves he has a heart. LOL! However, he was at the ham breakfast on Saturday and made an appearance for several hours at RARSfest. So, remember him, Steve Jr., and Miss Gloria as well (particularly).

Gary Plante, KO4LQX, has taken some chemo treatments and has good news on the various CT scans they were trying to do—apparently, the cancer is not spreading and one image may be enlarged lymph nodes caused by heavy coughing spells.

Velda, K4VJC, and Mike, KD4MC, are faced with serious financial challenges to settle her medical bills. There is a 'Go Fund Me' site for her medical expenses that I think you can access from Mike's Facebook page or the JARS FB page. Please consider contributing whatever you can to help them out.

Kenny, KJ4CVK, has a colonoscopy scheduled in the next few days, so he needs our prayer support for a good outcome.

Look for other news and info in the body of the newsletter.

SWARC de K7RLH

Notes from KO4ZFO

"Thanks to all who attended our SKYWARN presentation this month. I really hope you enjoyed it and learned something new.

Our club t-shirts came in, so if you would like to purchase a shirt, please reach out to me by email at ko4zfo@gmail.com or call my cell (910.514.3041). Please leave a voicemail if I am unavailable. Here is what I have left: 5 (X-Large), 2 (Large), 1 (2XL), and 1 (Medium). Shirts are \$15 dollars. If all of the shirts sell out, we can do another run in the summer. I was really happy with how they turned out. I will bring the remaining shirts with me to the next meeting, so if you would like to purchase them there, I will have what is available.

Thanks again and I look forward to seeing you at the next meeting. 73"

Rodney Warren - KO4ZFO

SWARC VP

SWARC 5 April 2023 Meeting Recap

Since we currently have no club secretary, here is a recap of the meeting.

Once again, we had a hodgepodge of food, but no one left hungry. Bill, KK4QDZ, brought some really fine chili that was accompanied by chips, corn bread, rice, biscuits and chicken provided by other attendees.

The meeting opened with the Pledge of Allegiance, followed by introductions around the room and Christy's treasurer report that she sent to me. Richard (K7RLH) asked for volunteer support to sell r

In-Person Attendees included:

Richard Hall (K7RLH), Bill Blomgren (KK4QDZ), Rodney Warren (KO4ZFO), Al Crawford (WA4TCJ), Linda Crawford (KI4LO), guest Rich Gehle (N4DPQ), Brian Knox (KK4BK), Dave Krum (NW3U), Don Nicholson (KN4OEY), Paul Nicholson (KN4NGI), Charley Bratton (KE4QBW), Dave Yow (K4MSE), Steve Suzanne (WB4SMS), Robert Walker (KQ4GSA), and Thomas McCullough (KO4WXJ).

Old/Unfinished Business

None.

We only have one key to the radio room, which is kept in the lock box by the door. Members wishing to access the radio room should contact one of the officers for the key box combination.

New Business

None.

Attention Badgeless Members

Al Crawford (WA4TCJ) has determined that name badges will cost about \$11.00 which includes shipping cost. Please contact Al directly at wa4tcj@juno.com if you wish to obtain a name badge—be sure to give him your name and call sign. He would like to place a reasonable size order to minimize the shipping cost impact.

Presentation Topic – SKYWARN Refresher

We were blessed to have Virginia Enzor, NC4VA, present our annual refresher course. Virginia is one of those folks with an alphabet of letters behind her name and she is very experienced in all types of emergency communications. As you can see from the attendee list, we had quite a crowd to hear her instructive messages to us, so that any reporting that we might have opportunity to share is properly formatted and correct in terms of measurement and other information required for the Raleigh NWS to issue advisories/warnings thru various media outlets and thru the SKYWARN network on VHF (145.210 repeater at this time). Be sure to follow up and renew your SKYWARN certification on the website that was provided.

TREASURER'S REPORT

Christy Fernandini's emailed report showed little change in the finances during March. Balance of \$1,444.64 with no obligated funds or invoices.

MEMBERSHIP

You can bring a check or cash for dues to the next meeting or mail them to the club PO box and Christy will let me know she has received them. Also, you can now renew somewhat online by contacting Christy and giving her the appropriate credit card info for the 'Square' account. Christy's email is

christyfernandini@outlook.com. Make checks payable to South Wake ARC.

Send it to South Wake ARC – PO Box 1565 – Fuquay Varina, NC 27526

NET REPORT

SWARC Group – March 2023

We have three individuals who can be referred to as net check in champs for March; they are Bill, KK4QDZ, Richard, K7RLH, and Al, WA3JJG. The monthly total of check-ins was 281—significantly up from last month! Note that **not** all net controls record their counts so numbers could be higher than recorded.

- Saturday and Sunday evenings will be called by KT4JR & K7RLH
- KO4ZFO will call Monday evenings
- KA0GMY will call Tuesday evenings (backup is K7RLH)
- KK4BK will call Wednesday evenings except on meeting nights
- KJ4CVK will call Thursday evenings
- Fridays will continue to be called by NC4MP
- And we need backups – JUST BECAUSE.

Please contact Richard Hall, K7RLH, if you are interested in calling one or more nets.

Public Service

Check the HPSNC.org web site often for Public Service opportunities. The public service season is upon us and events need volunteers. You may also get to public service events on the RARS website.

Dave Krum (NW3U), reported a scheduled event in May. Other events will follow throughout the remainder of the year.

SWARC Mission Statement

South Wake ARC's primary purpose is to further the Amateur Radio Service through programs, activities, and education, in order to promote the radio knowledge, fraternalism and individual operating efficiency of its members. Further, it shall be our purpose to support the welfare of our community through public service including radio communications for emergency situations and public events, and through providing information, training, and assistance to individuals or organizations with an interest in the Amateur Radio Service.

BOARD OF DIRECTORS

President

Richard Hall--K7RLH

Vice President

Rodney Warren—KO4ZFO

Secretary

Vacant

Treasurer

Christy Fernandini - KJ4AEO

Member-At-Large

Al Crawford – WA4TCJ

Member-At-Large

Bernie Jones – N4BAJ

Member-At-Large

Mike Gaither –
K4MWG

Member-At-Large

Brian Knox--KK4BK

Membership Chair

Steve Suzanne—
WB4SMS

Appointed Positions

NET MANAGER

Kenny Souther-KJ4CVK

Special Events Director

Gino Fernandini –KI4YXO

Public Service Director

David Krum – NW3U

LINKS (if you have other links you want added then send them to me)

PRN

A Wide Area Digital Amateur Radio Network

www.ncprn.net

GigaParts

www.gigaparts.com

QRZ

www.qrz.com

Ham Radio Outlet HRO

www.hamradio.com

Raleigh Amateur Radio Society RARS

www.rars.org

Johnson Amateur Radio Society JARS

www.jars..net

South Wake Amateur Radio Club SWARC

www.southwakearc.com

Carolina 440 Network

www.carolina440.net

_North Carolina Packet

www.ncpacket.com

_TARPN (Terrestrial Amateur Packet Radio Net)

www.tarpn.net

Useful Ham Info

www.torborg.com/a

_Car Radio Development History

<https://www.titlemax.com/articles/the-history-of-the-car-radio/>

ARRL News

In Brief...

NASA Names Three Hams for Artemis II Moon Mission Crew

NASA and the Canadian Space Agency (CSA) announced the four astronauts who will venture around the moon on Artemis II. This will be the first crewed mission on NASA's path to establishing long-term moon science and exploration development. The agencies revealed the crew members on Monday, April 3, 2023, during an event at Ellington Field near NASA's Johnson Space Center in Houston, Texas. Three of the four crew members are amateur radio operators.

"The Artemis II crew represents thousands of people working tirelessly to bring us to the stars. This is their crew, this is our crew, this is humanity's crew," said NASA Administrator Bill Nelson. "NASA astronauts Reid Wiseman, Victor Glover, and Christina Hammock Koch, and CSA astronaut Jeremy Hansen, each has their own story, but together, they represent our creed: E pluribus unum - out of many, one. Together, we are ushering in a new era of exploration for a new generation of star sailors and dreamers - the Artemis Generation."

The crew will work as a team to execute an ambitious set of demonstrations during the flight test.

Their assignments are as follows: Commander Reid Wiseman, KF5LKT, Pilot Victor Glover, KI5BKC, Mission Specialist 1 Christina Hammock Koch, and Mission Specialist 2 Jeremy Hansen, KF5LKU. Koch had planned to study and take her amateur license exam in 2019, but her flight was suddenly rescheduled 6 months earlier than originally planned. She had to immediately begin preparing for her flight instead of studying.

The Artemis II mission is scheduled to launch in November 2024. The approximately 10-day flight test will launch on the agency's powerful Space Launch System rocket, prove the Orion spacecraft's life-support systems, and validate the capabilities and techniques needed for humans to live and work in deep space.

For more information, visit the [NASA](https://www.nasa.gov) website.

Hamvention 2023 Getting Ready

Dayton Hamvention® 2023, scheduled for May 19 - 21, is just six weeks away and preparations are moving forward for the big event.

Tickets are now available online and by mail order. They can be purchased at <https://hamvention.org/purchase-tickets>.



The crew of NASA's Artemis II mission (left to right): NASA astronauts Christina Hammock Koch, Reid Wiseman KF5LKT, (seated), Victor Glover, KI5BKC, and CSA astronaut Jeremy Hansen, KF5LKU. Credits: NASA.

Hamvention, which is amateur radio's largest annual convention, is held at the Greene County Fairgrounds and Expo Center in Xenia, Ohio.

ARRL is readying its large participation at Hamvention. ARRL's exhibit area will be located in Building 2 and will include program representatives and volunteers supporting over a dozen booths and activities.

With nearly 700 volunteers, this year's Hamvention will boast more than 500 indoor exhibits and more than 2,500 outdoor exhibits. The event showcases the latest in amateur radio equipment, technology, and computer software and hardware, along with hard-to-find radio and computer accessories and equipment. For the latest information about [Hamvention 2023](#), visit their website.



Time to Get Ready for Field Day

ARRL Field Day is just over two months away, but like spring cleaning, it pays to start getting ready now.

2023 Field Day will be held June 24 - 25. It is ham radio's open house. Every June, hams throughout North America set up temporary transmitting stations in public places to demonstrate ham radio's science, skill and service to communities and the nation. It combines public service, emergency preparedness, community outreach, and technical skills all in a single event. Some participants may also choose to operate from home, using the exercise to develop and practice their personal radio communications capability.



Field Day has been an annual event since 1933 and remains the most popular event in ham radio.

In 2022, 4,929 entries were submitted (including check logs), and there was a total of 29,679 reported participants.

Field Day is open to all amateurs in the areas covered by the ARRL/RAC Field Organizations and countries within IARU Region 2. DX stations residing in other regions may be contacted for credit and may submit entries as check logs.

The main focus of Field Day is to work as many stations as possible on the 160-, 80-, 40-, 20-, 15-, and 10-meter HF bands, all bands on 50 MHz and above, and to learn to operate in abnormal situations in less-than-optimal conditions. A premium is placed on developing skills to meet the challenges of emergency preparedness and acquaint the general public with the capabilities of amateur radio.

For Field Day 2023, several rules changes have been made. It's a good idea to make sure that your logging software has been updated to the most current version to incorporate these rule changes including the updated Canadian sections list. There are many facets to operating on Field Day and knowing the rules and keeping good logs are paramount to successful contacts.

Many local amateur radio clubs participate in ARRL Field Day. To start preparing for Field Day,

check out arrrl.org/field-day for the official rules and all the information you'll need. To find a participating radio club in your area, use the Field Day Locator on the page.

If you are having trouble reading this message, you can see the original at:
<http://www.arrrl.org/arrrlletter/?issue=2023-04-06>



April 6, 2023

John E. Ross, KD8IDJ, [Editor](#)

[ARRL Home Page](#)

[ARRL Letter Archive](#)

[Audio News](#)



- [NASA Names Three Hams for Artemis II Moon Mission Crew](#)
- [Hamvention 2023 Getting Ready](#)
- [Time to Get Ready for Field Day](#)
- [Amateur Radio in the News](#)
- [ARRL Podcasts](#)
- [Announcements](#)
- [In Brief...](#)
- [The K7RA Solar Update](#)
- [Just Ahead in Radiosport](#)
- [Upcoming Section, State, and Division Conventions](#)

NASA Names Three Hams for Artemis II Moon Mission Crew

NASA and the Canadian Space Agency (CSA) announced the four astronauts who will venture around the moon on Artemis II. This will be the first crewed mission on NASA's path to establishing long-term moon science and exploration development. The agencies revealed the crew members on Monday, April 3, 2023, during an event at Ellington Field near NASA's Johnson Space Center in Houston, Texas. Three of the four crew members are amateur radio operators.

"The Artemis II crew represents thousands of people working tirelessly to bring us to the stars. This is their crew, this is our crew, this is humanity's crew," said NASA Administrator Bill Nelson. "NASA astronauts Reid Wiseman, Victor Glover, and Christina Hammock Koch, and CSA astronaut Jeremy Hansen, each has their own story, but together, they represent our creed: E pluribus unum - out of many, one. Together, we are ushering in a new era of exploration for a new generation of star sailors and dreamers - the Artemis Generation."

The crew will work as a team to execute an ambitious set of demonstrations during the flight test.

Their assignments are as follows: Commander Reid Wiseman, KF5LKT, Pilot Victor Glover, KI5BKC, Mission Specialist 1 Christina Hammock Koch, and Mission Specialist 2 Jeremy Hansen, KF5LKU. Koch had planned to study and take her amateur license exam in 2019, but her flight was suddenly rescheduled 6 months earlier than originally planned. She had to immediately begin preparing for her flight instead of studying.

The Artemis II mission is scheduled to launch in November 2024. The approximately 10-day flight test will launch on the agency's powerful Space Launch System rocket, prove the Orion spacecraft's life-support systems, and validate the capabilities and techniques needed for humans to live and work in deep space.

For more information, visit the [NASA](https://www.nasa.gov) website.

Hamvention 2023 Getting Ready

Dayton Hamvention® 2023, scheduled for May 19 - 21, is just six weeks away and preparations are moving forward for the big event.

Tickets are now available online and by mail order. They can be purchased at <https://hamvention.org/purchase-tickets>.

Hamvention, which is amateur radio's largest annual convention, is held at the Greene County Fairgrounds and Expo Center in Xenia, Ohio.

ARRL is readying its large participation at Hamvention. ARRL's exhibit area will be located in Building 2 and will include program representatives and volunteers supporting over a dozen booths and activities.

With nearly 700 volunteers, this year's Hamvention will boast more than 500 indoor exhibits and more than 2,500 outdoor exhibits. The event showcases the latest in amateur radio equipment, technology, and computer software and hardware, along with hard-to-find radio and computer accessories and equipment. For the latest information about [Hamvention 2023](https://hamvention.org), visit their website.



The crew of NASA's Artemis II mission (left to right): NASA astronaut Christina Hammock Koch, Reid Wiseman KF5LKT, (seated), Victor Glover, KI5BKC, and CSA astronaut Jeremy Hansen, KF5LKU. Credits: NASA.



Time to Get Ready for Field Day

ARRL Field Day is just over two months away, but like spring cleaning, it pays to start getting ready now.

2023 Field Day will be held June 24 - 25. It is ham radio's open house. Every June, hams throughout North America set up temporary transmitting stations in public places to demonstrate ham radio's science, skill and service to communities and the nation. It combines public service, emergency preparedness, community outreach, and technical skills all in a single event. Some participants may also choose to operate from home, using the exercise to develop and practice their personal radio communications capability.



Field Day has been an annual event since 1933 and remains the most popular event in ham radio.

In 2022, 4,929 entries were submitted (including check logs), and there was a total of 29,679 reported participants.

Field Day is open to all amateurs in the areas covered by the ARRL/RAC Field Organizations and countries within IARU Region 2. DX stations residing in other regions may be contacted for credit and may submit entries as check logs.

The main focus of Field Day is to work as many stations as possible on the 160-, 80-, 40-, 20-, 15-, and 10-meter HF bands, all bands on 50 MHz and above, and to learn to operate in abnormal situations in less-than-optimal conditions. A premium is placed on developing skills to meet the challenges of emergency preparedness and acquaint the general public with the capabilities of amateur radio.

For Field Day 2023, several rules changes have been made. It's a good idea to make sure that your logging software has been updated to the most current version to incorporate these rule changes including the updated Canadian sections list. There are many facets to operating on Field Day and knowing the rules and keeping good logs are paramount to successful contacts.

Many local amateur radio clubs participate in ARRL Field Day. To start preparing for Field Day, check out arrl.org/field-day for the official rules and all the information you'll need. To find a participating radio club in your area, use the Field Day Locator on the page.

Amateur Radio in the News

ARRL Public Information Officers, Coordinators, and many other member-volunteers help keep amateur radio and ARRL [in the news](#).

[Share](#) any amateur radio media hits you spot with us.

ARRL Podcasts

On the Air

Sponsored by [Icom](#)



Radio orienteering (aka amateur radio direction finding, or ARDF) is a radio sport like no other. In this episode, we talk to USA ARDF Co-coordinator Charles Scharlau, NZØI, about how get involved in what he calls, "the only *athletic* radio sport." Radio orienteering will get you out of your shack chair and bounding through the woods or a park, using a handheld receiver and directional antenna to find a transmitter that's located somewhere in the vicinity. People of all ages and skill levels can have fun with radio orienteering -- and you don't even need a ham radio license to join in.

ARRL Audio News

Listen to [ARRL Audio News](#), available every Friday. ARRL Audio News is a summary of the week's top news stories in the world of amateur radio and ARRL, along with interviews and other features.

The On the Air podcast is available on iTunes (iOS) and Stitcher (Android). The On the Air podcast and ARRL Audio News are also on blubrry -- [On the Air](#) | [ARRL Audio News](#).

Announcements

The Lewis and Clark Trail on the Air special event commemorates the historic path the explorers took on their trek across the Midwest. The trail covers 4,900 miles and 16 states. This includes the disembarkation from Camp Dubois and what is referred to as the [Eastern Legacy](#). The event is sponsored by the [Clark County Amateur Radio Club](#), with support and participation from other clubs in all 16 states along the historic trail. The 2023 event will run 24 hours per day beginning June 3 and continuing through June 18 (June 2, 5:00 PM Pacific Time to June 18, 5:00 PM Pacific Time). The rules are simple: contact one club in each of the 16 states on the historic Lewis and Clark Trail. Operating modes include SSB phone, FM phone, CW, and FT8. Any combination of modes used to work all 16 states is allowed. The on-air exchange will include the call sign and name of the operator. Additional information, such as a signal report or a Parks on the Air park designation, may also be logged but is not required. Additional information can be found at [Lewis & Clark Trail on the Air \(lctota.org\)](#).

In Brief...

Canadian amateur radio operators will be able to participate in a special event honoring the coronation of His Majesty King Charles III. The coronation takes place on May 6, 2023, and the special event runs from **May 5 to July 2. Operators will be able to use special event call sign prefixes.** Innovation, Science and Economic Development Canada ([ISED](#)) has approved the special call signs, which will correspond to the early summer operating season. All Canadian amateurs can use the special event call sign prefixes for all occasions, including Field Day and the Radio Amateurs of Canada Day Contest. More information about the special event call signs is available [here](#). Additional information about the coronation can be found at [King Charles: When is the coronation and what do we know about it? - BBC News](#).

The K7RA Solar Update

Tad Cook, K7RA, of Seattle, Washington, reports for this week's ARRL Propagation Bulletin, ARLP014:

Average solar flux and sunspot numbers went down this week. Sunspot numbers are down by half, from 112.6 last week to 53.4 this week. Average daily solar flux declined from 156.1 to 132.5.

Geomagnetic indicators also declined this week. The average daily planetary A index went from 23.3 last week to 15 this week. Average daily middle latitude A index went down from 13.7 to 11.7.

The middle latitude A index for April 1 was not available, so my guess for it is 11.

Predicted solar flux is 140 on April 6 - 8; 135 on April 9 - 11; 140 on April 12 - 13; 130 on April 14; 135 on April 15 - 17; 140 on April 18 - 20; 135 on April 21 - 23, then 130, 125, and 120 on April 24 - 26; 115 on April 27 - 29; 125 on April 30; 120 on May 1 - 2; 115 on May 3 - 4, and 110 on May 5 - 7.

Predicted planetary A index was 8 on April 6; 5 on April 7 - 10, then 8, 8, and 5 on April 11 - 13; 8 on April 14 - 15, then 12, 10, and 15 on April 16 - 18, then 5, 20, 15, and 10 on April 19 - 22; 5 on April 23 - 25, then 15 and 18 on April 26 - 27; 15 on April 28 - 29; 8 on April 30; 10 on May 1 - 2; 8 on May 3, and 5 on May 4 - 6.

This video from Tamitha Skov features flares and wind, and came out right after last week's bulletin:

<https://youtu.be/F8ERhLiOK88>

Sunspot numbers for March 30 through April 5, 2023, were 99, 61, 23, 54, 56, 44, and 37, with a mean of 53.4. 10.7-centimeter flux was 140.3, 129.3, 125.3, 126.9, 133.6, 135.7, and 136.6, with a mean of 132.5. Estimated planetary A indices were 17, 21, 13, 15, 15, 13, and 11, with a mean of 15. Middle latitude A index was 11, 17, 11, 13, 11, 10, and 9, with a mean of 11.7.

Send your tips, questions, or comments to k7ra@arrl.net.

A comprehensive K7RA Solar Update is posted Fridays on the ARRL website. For more information concerning radio propagation, [visit](#) the ARRL Technical Information Service, [read](#) "What the Numbers Mean...", and [check out](#) the Propagation Page of Carl Luetzelschwab, K9LA.

A propagation bulletin [archive](#) is available. For customizable propagation charts, visit the [VOACAP Online for Ham Radio](#) website.

[Share](#) your reports and observations.

A weekly, full report is posted on [ARRL News](#).



Solar disk image taken April 6, 2023, courtesy of NASA SDO/HMI.

Upcoming Contests:

- April 8 - 9 -- DIG QSO Party, (CW)
- April 8 - 9 -- OK/OM DX Contest, SSB (phone)
- April 8 - 9 -- IG-RY World Wide RTTY Contest (digital)
- April 8 - 9 -- New Mexico QSO Party (CW, phone, digital)

- April 8 - 9 -- Georgia QSO Party (CW, phone)
- April 8 - 9 -- Yuri Gagarin Int'l DX Contest (CW)
- April 9 -- WAB 3.5/7/14 MHz Data Modes (digital)
- April 10 -- 4 States QRP Group 2nd Sun Sprint (CW, phone)
- April 10 -- DARC Easter Contest (CW, phone)
- April 10 -- 144 MHz Spring Sprint (CW, phone, digital)
- April 12 -- NAQCC CW Sprint (CW)

Visit the [ARRL Contest Calendar](#) for more events and information.



Celebrate
National Contest Journal's
50th Year of Publication

Get a commemorative
challenge coin with your
NCJ subscription!

Subscribe Now >

Upcoming Section, State, and Division Conventions

- April 15 | [Sussex Amateur Radio and Electronics Expo](#), hosting the ARRL Delaware State Convention, Georgetown, Delaware.
- May 7 | [Warminster Amateur Radio Club Hamfest](#), hosting the ARRL Eastern Pennsylvania Section Convention, Bristol, Pennsylvania
- May 13 | [ARRL Nebraska State Convention](#), Lincoln, Nebraska
- May 19 - 21 | [Dayton Hamvention](#), hosting the ARRL Great Lakes Division Convention, Xenia, Ohio
- June 2- 4 | [SEA-PAC](#), hosting the ARRL Northwestern Division Convention, Seaside, Oregon
- June 3 | [Atlanta Hamfest](#), hosting the ARRL Georgia Section Convention, Marietta, Georgia
- June 4 | [BreezeShooters Hamfest](#), hosting the ARRL Western Pennsylvania Section Convention, Prospect, Pennsylvania
- June 17 | [Knoxville Hamfest and Electronics Convention](#), hosting the ARRL Tennessee State Convention, Knoxville, Tennessee

Search the [ARRL Hamfest and Convention Database](#) to find events in your area.

Have News for ARRL?

Submissions for the ARRL Letter and ARRL News can be sent to news@arrl.org. -- John E. Ross, KD8IDJ, ARRL News [Editor](#)

ARRL -- Your One-Stop Resource for Amateur Radio News and Information

- **[Join or Renew Today!](#)** Eligible US-based members can elect to receive [QST](#) or [On the Air](#) magazine in print when they join ARRL or when they renew their membership. All members can access digital editions of all four ARRL magazines: *QST*, *On the Air*, *QEX*, and *NCJ*.
- Listen to [ARRL Audio News](#), available every Friday.
- *The ARRL Letter* is available in an accessible format, posted weekly to the [Blind-hams Groups.io](#) email group. The group is dedicated to discussions about amateur radio as it concerns blind hams, plus related topics including ham radio use of adaptive technology.

Subscribe to...

- [NCJ -- National Contest Journal](#). Published bimonthly, features articles by top contesters, letters, hints, statistics, scores, NA Sprint, and QSO parties.
- [QEX -- A Forum for Communications Experimenters](#). Published bimonthly, features technical articles, construction projects, columns, and other items of interest to radio amateurs and communications professionals.

Free of charge to ARRL members...

- [Subscribe](#) to the *ARES Letter* (monthly public service and emergency communications news), the *ARRL Contest Update* (biweekly contest newsletter), Division and Section news alerts, and much more!
- Find ARRL on [Facebook](#)! Follow us on [Twitter](#) and [Instagram](#)!



The ARRL Letter is published Thursdays, 48 times each year. ARRL members may subscribe at no cost or unsubscribe by editing their Member D

Copyright © 2023 American Radio Relay League, Incorporated. Use and distribution of this publication, or any portion thereof, is permitted for non- with attribution. All other purposes require written permission.

ARRL, The National Association for Amateur Radio®
225 Main Street, Newington CT, 06111-1400 USA
860-594-0200

www.arrl.org